

Gulf Cooperation Council

EDICT OF GOVERNMENT

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GSO 987 (2012) (English): Bottled Natural Mineral Water (Draft Standard)



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هيئة التقييس لدول مجلس التعاون لدول الخليج العربية
GCC STANDARDIZATION ORGANIZATION (GSO)

المشروع : نهائي

GSO 05/FDS 987/2012

المياه المعدنية الطبيعية المعبأة
Bottled natural mineral water

Prepared by:

Gulf technical committee for sector standards of
Food and agriculture products

This document is a draft Gulf standard circulated for comments, it is therefore, subject to alteration and modification, and may not be referred as a Gulf standard, until approved by the Board of Directors.

ICS: 13.060.10

Bottled natural mineral water

Date of GSO Board of Directors' Approval : //14 h (/ /20)
Issuing Status : Technical regulations

Foreword

GCC Standardization Organization (GSO) is a regional Organization which consists of the National Standards Bodies of GCC member States. One of GSO main functions is to issue Gulf Standards /Technical regulations through specialized technical committees (TCs).

GSO through the technical program of committee TC No.(5) " Gulf technical committee for standards of food and agriculture products" has updated the GSO Standard No. GSO 987/2000 "Bottled natural mineral water". The Draft Standard has been prepared by (STATE OF QATAR).

The draft Standard has been prepared based on relevant ADMO, International and National foreign Standards and references.

This standard has been approved as a Gulf Technical Regulation by GSO Board of Directors in its meeting No.(), held on / /14 h (/ /20 G) . The approved standard will replace and supersede the GSO standard No. (GSO 987/2007) *

Bottled natural mineral water**1- Scope and field of application:**

This Gulf standard is concerned with bottled natural mineral water offered for sale as food product. It doesn't apply to natural mineral water sold or used for other purposes.

2- Complementary Standards:

- 2.1 GSO (9): "Labeling of prepackaged foodstuffs".
- 2.2 GSO (21): "Hygienic regulations for food plants and their personnel".
- 2.3 GSO (111): "Methods of test for drinking and mineral water – part1: Sampling".
- 2.4 GSO (112): "Methods of test for drinking and mineral water - part2: Determination of physical properties".
- 2.5 GSO (116): "Methods of test for drinking and mineral water - part3: Determination of total dissolved solids, PH value and residual chlorine".
- 2.6 GSO (117): "Methods of test for drinking water – part4: Methods of determination of cadmium, lead, arsenic, selenium and cyanide".
GSO (150): "Expiration dates for food products".
- 2.8 GSO (154): "Methods of test for drinking and mineral water-part7: Determination of mercury, chromium, silver and barium.
- 2.9 GSO (168): "Requirements for storage facilities for dry and canned foodstuff".
- 2.10 GSO (257) "Methods of test for drinking water–part10: Determination of mineral oils".
- 2.11 GSO (378): "Methods of test for drinking water - part13: Routine microbiological tests (reference method)".
- 2.12 GSO (379): "Methods of test for drinking water - part14: Determination of some pollution indicating materials".
- 2.13 GSO (642): "Methods of test for drinking water – part6: Determination of nitrate, fluoride and borate".
- 2.14 GSO (818) : "Methods of test for drinking water – part15: n-routine microbiological tests".
- 2.15 GSO (839): "Food packages -Part1: General requirements".
- 2.16 GSO (988): "Limits of radioactivity levels permitted in food stuffs- Part 1".
- 2.17 GSO (998): "Methods for detection of permissible radionuclide's limits in foodstuff- Part 1: Gamma spectrometry analysis CS134, CS 137".

- 2.18 GSO 353" Methods of test for drinking water- Part 13: Determination of radioactive and concentration of some radio elements".
- 2.19 GSO (1016):" Microbiological criteria for foodstuff- part1"
- 2.20 GSO (1025):"Bottled drinking water".
- 2.21 GSO /CAC/GL 2:"Guidelines on nutrition labeling".
- 2.22 GSO/CAC/GL 1"General guidelines on claims" .
- 2.23 GSO which the Organization shall approve concerned with "Code of practice for collecting, processing and marketing natural mineral water".

3- Definitions:

3.1 Natural mineral water:

A type of water clearly distinguishable from ordinary drinking water (item 2.19) as follows:

- 3.1.1 It is obtained directly from natural or drilled sources as part of underground water bearing strata, for which due precautions should be taken to avoid possible pollution affecting it's chemical and physical properties.
- 3.1.2 Its contents are some mineral salts with relative proportions, beside elements other constituents.
- 3.1.3 The constancy of its composition and stability of its discharge and its temperature. Due care should be taken regarding the cycles of the natural fluctuations.
- 3.1.4 It is normally produced under conditions likely to guarantee the original microbiological purity and sound chemical composition of its basic components.
- 3.1.5 It should not be subject to any treatment other than those permitted as per this standard.
- 3.1.6 It is packed in hermetical containers closed to the point of emergence of the source with particular hygienic precautions.
- 3.1.7 Its characteristics comply with all the laid-down requirements as per this standard.

- 3.2 **Naturally carbonated natural mineral water (effervescent):** Is a natural mineral water which, after treatment as per item (4.1.2) and reincorporation of gas from the same source and after packaging taken into consideration usual technical tolerance, has the same content of carbon dioxide gas spontaneously and visibly given off under normal conditions of temperature and pressure

- 3.3 **Non-carbonated natural mineral water (un-effervescent):** Is a natural mineral which doesn't contain free carbon dioxide (naturally or from treatment as per specification in item (4.1.2), with due consideration to the permissible technical tolerance) with amount in excess of the amount necessary to keep the hydrogen carbonate salts present in the water dissolved.

- 3.4 **De-carbonated natural mineral water:** Is a natural mineral water which, after treatment as per item (4.1.2) and after packaging, has less carbon dioxide gas content than that at emergence and does not visibly spontaneously give off carbon dioxide under natural conditions of temperature and pressure.
- 3.5 **Natural mineral water fortified with carbon dioxide from the source:** Is a natural mineral water which, after treatment as per item (4.1.2) and after packaging, has more carbon dioxide content than that at emergence.
- 3.6 **Carbonated natural mineral water:** Is a natural mineral water which, after treatment as per item (4.1.2) and after packaging, has been made effervescent by the addition of carbon dioxide from another origin.
- 3.7 **Authorization:** A certificate issue by the concerned authorities in the state, in which the natural mineral water has emerged.

4 - **Characteristics:**

The following characteristics shall be met in bottled natural mineral water:

4.1 **Physical characteristics:**

- 4.1.1 It shall be free from color, odor, impurities, turbidity, and from unpleasant taste.
- 4.1.2 The following treatment may only be carried out on natural mineral water prior to packaging:
- 4.1.2.1 Separation of suspended constituents such as compounds containing iron, manganese, sulfur or arsenic, by decantation and/or filtration, if necessary, accelerated by previous aeration.
- 4.1.2.2 The treatment provided for in items(3.2,3.3, 3.4,3.5, 3.6, 4.1.2.1) shall be applicable only on condition that the mineral content of water is not modified in terms of its basic constituents which give the mineral water its natural properties.
- 4.2. Total dissolved solids:-
- 4.2.1 Natural mineral water with very low mineral content: Total content of dissolved solids is below 50 mg/L.
- 4.2.2 Natural mineral water with low mineral content: Total content of dissolved solids is ranging from 50-500 mg/L.
- 4.2.3 Natural mineral water rich with mineral content: Total content of dissolved solids is ranging from 500-1500 mg/L.

4.3 **Health related limits for given substances:**

- 4.3.1 Natural mineral water shall contain minerals within the permitted limits given against each element as follows:-

Maximum limits for mineral elements in natural mineral water

Substance	Maximum permitted limits (mg/L)	Calculated as
- Antimony	0.005	As total As
- Arsenic	0.01	
- Barium	0.7	
- Borate	5	As B
- Cadmium	0.003	As total Cr
- Chromium	0.05	
- Copper	1	
- Cyanide	0.07	as nitrate as nitrite
- Fluoride	See Item 5.9	
- Lead	0.01	
- Manganese	0.4	
- Mercury	0.001	
- Nickel	0.02	
- Nitrate	50.0	
- Nitrite	0.01	
- Selenium	0.01	

4.3.2 It shall be free from the following substances:

- Surface active agents.
- Pesticides and PCBs.
- Mineral oils.
- Poly-nuclear aromatic hydrocarbons.

4.4 Microbiological characteristics:

The product, during marketing, shall comply with microbiological requirements stated in the Gulf Standard mentioned in item (2.19).

4.5 Radiological characteristics:

The radioactivity levels of the product shall not exceed to what mentioned in Gulf Standard stated in Item (2.16).

5. Hygienic requirements:

Without prejudice to what was stated in the Gulf Standard mentioned in Items (2.2, 2.23) the following condition should be met:-

- 5.1 The installation intended for collection of water, pipes and the reservoirs shall be made from materials suited to the water and in such a way as to prevent the introduction of foreign substances into the water.

- 5.2 The equipments and its use for production, especially installations for washing and packaging, shall meet hygienic requirements.
- 5.3 All processes in the factory shall be stopped if contamination of water has been detected during the production, until the removal of contamination.
- 5.4 The source and water outflow points shall be protected from contamination hazards.
- 5.5 The previous regulations shall be subject to control and periodical check by authorized bodies.

6. Sampling:

Samples shall be taken in accordance with the Gulf Standard stated in item (2.3).

7. Methods of examination and testing:

Tests shall be carried out as per the Gulf Standards stated in items (2.4), (2.5), (2.6), (2.8), (2.10), (2.11), (2.12), (2.13), (2.14), (2.17).

8. Packing, Transportation and Storage:

The following shall be met during the packaging, transportation and storage of the product:

8.1 Packaging:

- 8.1.1 The containers used in the packaging shall be made from materials non-hazardous for health, clean, sterilized and shall not lead to any objectionable change in taste, odor or color characteristics of natural mineral water, and shall comply with what has been stated in the Gulf Standard mentioned in item (2.15).

- 8.1.2 The containers shall be brand new and not previously used and shall be free from various processing defects.

8.2 Transportation:

- 8.2.1 The containers shall be transported in carton boxes or any other means not leading to damage or spoilage during transportation or handling.
- 8.2.2 Transportation means shall be provided to in the containers against contamination and shall be not previously used in transportation of insecticides, fungicides or any toxic or harmful substances.
- 8.2.3 The transportation of natural mineral water in bulk containers for packaging or for any other process before packaging is prohibited.

8.3 Storage:

The stocks shall be stored in well- ventilated stores at a temperature that wouldn't cause any undesirable change in the product and shall be far from the sources of

heat and contamination. The stores shall comply with what has been stated in the Gulf Standard mentioned in item (2.9).

9. Labeling:

Without prejudice to what has been mentioned in the Gulf Standards stated in items (2.1), (2.7), (2.19), (2.21), the following shall be labeled on the label of the container:

- 9.1 The name of the product: "Bottled natural mineral water".
- 9.2 The type of the water according to what has been stated in items (3.2) to (3.6).
- 9.3 Description of the water shall be add to the name of the product according to the total dissolved solids content as mentioned in Item (4.2).
- 9.4 Location and the name of water source if different than location.
- 9.5 Permissible natural treatments to which bottled natural mineral water has been submitted.
- 9.6 Where the product contains more than 1mg/l of fluoride, the statement "the product contains fluoride" shall appear as part of, or in close proximity to the name of the product.

In addition, the statement "the product is not suitable for infants and children under age of seven years" when the product contains more than 1.5 mg/l fluoride.
- 9.7 Analytical composition of the product characteristics.

9.8 prohibited information:

- 9.8.1 It is prohibited to write down any statement concerning medical (preventive-alleviate- curative) in accordance with product characteristics stated in this standard.
- 9.8.2 The name of locality, village or specified location may not form a part of the trade name of the product; unless it refers to a natural mineral water collected at the place designated as per the trade name.
- 9.8.3 Any statement or any pictorial device which may lead to confusion to the consumer about the nature, origin, composition and properties of water.

9.9 Optional labeling:

- 9.9.1 Trade name.
- 9.9.2 Date of licensing.